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PACKAGING FOR TWO PRODUCTS THAT HAVE TO BE ISOLATED FROM ONE
ANOTHER AT LEAST UNTIL THEIR USE

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List of documents mentioned in the search report: Refer to the end of this section.

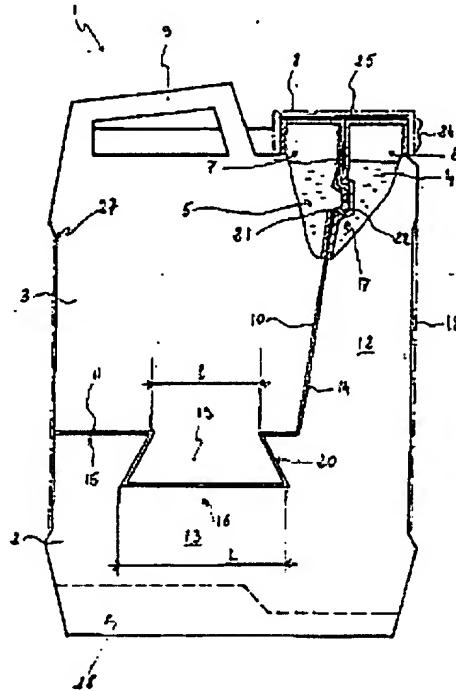
[Abstract]

The invention relates to a packaging for two products that have to be isolated from one another at least until their use.

This packaging, which moreover has some means of association (8, 16, 17, 18) in order to hold the two canisters together, is characterized by the fact that these means of association have, between at least one of the groups of bearing surfaces facing one another (10, 14 and 11, 15) of the two canisters, at least one assembly (16) by tenon (19) and groove (20) with complementary cross sections, which groove (20):

- on one hand, opens on one of the bearing surfaces possessing it over a width (l) less than the width (L) in the same direction of this groove beyond its opening in said bearing surface and,

- on the other hand, opens at least at one of its ends in such a way as to allow the engagement of tenon (19) there by translation at least roughly parallel to the two bearing surfaces (14, 15) borne by the same canister.



The invention relates to a packaging for two products that have to be isolated from one another at least until their use.

Known (FR-A-2 456 678) to this effect is the use of a canister in which two separate compartments are delimited by a partition.

Also known (FR-A-2 446 777) is a packaging made up of two canisters connected with one another.

Connected to each of the parts formed by the compartments of the canisters is a neck ending with an emptying hole.

The emptying holes of these two parts can be contiguous and closed by the same cap.

Even if this packaging in two parts that remain connected together and closed by the same cap can be suitable when the entire amount of the products contained in the two parts is to be dumped out, this is not at all the case when, rather, only a fraction of each of them is to be removed in very precise proportions of one constituent with respect to the other.

In this case, it is in effect preferable to be able to manipulate both parts and to dump the two products out separately.

In order to arrive at this, it is of course possible to use two canisters that are at all times completely separate, but then the user risks not having both products in sufficient quantities at the desired time and, for example, in keeping with the proportions in which they are necessary in a mixture.

Known for remedying this is the use of a packaging that includes two canisters that can be separated, provided with means for their temporary association particularly during transport and storage until use of the products.

Known (FR-A-1 565 458) for example is a packaging formed by a number of tubular elements open at both their ends and connected together by two caps each hermetically closing one of the ends of said tubular elements.

This means of connection is however only suitable for products in similar quantity so that they can be contained in tubular elements of the same length.

Furthermore, the separation of the elements necessitates opening both their ends and therefore emptying them completely.

It is therefore only suitable for products that are to be used entirely.

Also known (FR-A-2 598 393 and 2 039 179) are packagings made up of two canisters, each preferably with a suitable size with respect to the other for taking into account the proportions in which the products need to be used, whether this be together or separately, and these canisters have shapes such that one of them, generally of larger size, and consequently said large canister, adopts the shape of the other canister, said small canister, on at least two surfaces not parallel to one another, including in particular the bottom and one lateral surface with respect to the small canister, so that the two canisters together produce a packaging of regular, roughly parallelepipedic shape.

In order to hold these two canisters connected in this way, means of association are known (FR-A-2 598 393), consisting of two cheeks connected with the large canister and between which it is possible to elastically squeeze the small canister, but besides the complexity which this gives to the large canister, considered separately, this means of association proves also to be not very effective, so before the first use, the two canisters are moreover generally connected together by fusing of ribs that are applied on one another in mounting.

But this makes separation difficult.

Furthermore, in case of partial use of the contents of the canisters, the user rarely has the means to re-establish this fusing and again finds the drawback of the lack of effectiveness of the connection.

Also known are means of association (FR-A-2 039 179) including, on the large canister, a rib perpendicular to the two surfaces in contact with the small canister and inserted in a

complementary groove of the small canister, which groove delimits more or less two cheeks which squeeze the rib.

This solution considered separately therefore has the same effectiveness as the preceding solution so for the association to be effective, the packaging moreover includes a container completely covering the small canister and at least partially covering the large canister.

But this container constitutes an additional piece to be manufactured and that therefore increases the cost price of the packaging.

One of the results that the invention aims to obtain is a packaging which remedies the aforementioned drawbacks.

To this effect, it relates to a packaging made up of two canisters, each preferably with suitable dimensions with respect to one another for taking into account the proportions in which the products need to be used, whether this be together or separately, and these canisters have shapes such that, by two bearing surfaces not parallel to one another, one of them, generally of larger size and consequently said large canister, adopts the shape of the other canister, said small canister, on at least two bearing surfaces also not parallel to one another, including in particular the bottom and a lateral surface, the two canisters together producing one packaging, preferably of regular, roughly parallelepipedic shape, which is moreover provided with a means of association of said canisters.

This packaging is in particular characterized by the fact that the means of association include, between at least one of the groups of bearing surfaces facing one another of the two canisters, at least one assembly by tenon and groove with complementary cross sections, which groove:

- on one hand, opens on the bearing surface possessing it over a width less than the width of this groove in the same direction beyond its opening in said bearing surface and,
- on the other hand, opens at least at one of its ends in such a way as to allow the engagement of the tenon there by translation at least roughly parallel to the two bearing surfaces borne by the same canister.

The invention will be understood well with the help of the description hereafter given as a non-limiting example with regard to the here-appended drawing which diagrammatically represents:

- Figure 1: the packaging seen from the front,
- Figure 2, the packaging seen from the top.

In reference to the drawing, it is seen that packaging 1 includes two canisters 2, 3, each preferably with suitable dimensions with respect to one another for taking into account the proportions in which products 4, 5 contained by them are intended to be used together or separately.

Each of these canisters has neck 6, 7 closed by cap 8.

At least one of the canisters can moreover have handle 9 facilitating grasping of it.

These canisters have shapes and dimensions such that, by two non-parallel bearing surfaces 14, 15, one of them 2 adopts the shape of the other canister 3 on at least two non-parallel bearing surfaces 10, 11.

The two canisters 2, 3 together preferably produce a packaging of regular, roughly parallelepipedic shape.

The canister that adopts the shape of the other has a roughly L-shaped longitudinal section of which vertical limb 12 extends from neck 6 to horizontal bar 13 of varying thickness, interior surfaces 14, 15 with respect to the angle formed by limb 12 and bar 13 producing bearing surfaces capable of adopting the shape of non-parallel surfaces 10, 11 of the other canister such as, in particular, its bottom 11 and one of its lateral surfaces 10.

The non-parallel surfaces of the two canisters are therefore distributed in the packaging in two groups, one including the surfaces facing one another 10, 14 forming the lateral surface of the small canister and the internal surface of the vertical limb of the other canister and the second including the surfaces facing one another 11, 15 forming the bottom of the small canister and the upper surface of the horizontal bar of the large canister.

Generally, canister 2 which adopts the shape of the other 3 is larger in size than the other, and consequently, but in a non-limiting manner, these canisters are hereafter respectively called said "large canister" and "small canister."

In order to hold the two canisters together, means of association 8, 16, 17, 18 are provided.

According to an essential characteristic of the invention, these means of association include, between at least one of the groups of bearing surfaces facing one another 10, 14 and 11, 15 of the two canisters, at least one assembly 16 by tenon 19 and groove 20 with complementary cross sections, which groove 20:

- on one hand, opens on one of the bearing surfaces possessing it over a width "l" less than the width "L" in the same direction of this groove beyond its opening in said bearing surface and,

- on the other hand, opens at least at one of its ends in such a way as to allow the engagement of tenon 19 there by translation at least roughly parallel to the two bearing surfaces 14, 15 borne by the same canister.

Preferably, groove 20 and tenon 19 have dovetail cross sections.

Advantageously, this assembly is offered by bearing surfaces 11, 15 producing upper surface 15 of the bar of the L-shaped canister and bottom 11 of the other canister 3.

According to another characteristic of the invention, in combination with aforementioned assembly 16, the means of association moreover include, in at least one of the groups of bearing surfaces 10, 14 and 11, 15, at least one means 17 for immobilization of this assembly in terms of translation.

This means 17 for immobilization in terms of translation includes at least two complementary impressions 21, 22, one (21) male, the other (22) female of smaller width than that of said bearing surfaces.

Preferably, immobilization means 17 is situated towards the free end of the vertical limb of the L-shaped canister.

Consequently, one benefits from the elasticity of the material over a maximum distance measured between immobilization means 17 and assembly 16.

It is thus possible to separate the two impressions 21, 22 sufficiently for the purpose of their disengagement from one another during connection or intentional separation of the two canisters 2, 3.

For example, the impressions are truncated conical.

So that even after possible lessening of the elasticity of the material constituting at least one of these canisters, impressions 21, 22 cannot become disengaged from one another unintentionally, according to yet another characteristic of the invention, in combination with the impressions, the packaging has single component 8 which fits on the two necks 4, 5, each of which is possessed by one of canisters 2, 3, in order to hold them applied against one another.

To this effect, preferably, component 8 consists of ring 23 surrounding at least locally the two necks that therefore at least locally have cross sections producing complementary fractions of the internal housing of this ring.

Preferably, the ring has a shape generated by revolution, particularly cylindrical, and is attached by screwing on corresponding bearing surface 24 of the two necks.

Preferably, the ring is an integral part of cap 8 that closes the holes of the neck or that at least applies sealing gasket or sheath 25 on each of them.

For labeling the packaging, sleeve 18 is preferably used, which is positioned by rolling and gluing or by retraction with heat or cold around the assembly, which sleeve will also provide a relative holding of the canisters in connected position.

Sleeve 18 will then extend over a part of the height of the assembly, and in order to set the sleeve in the required position, assembly 1 formed by the two canisters advantageously has peripheral necking 27 over a height at least equal to that of sleeve 18.

In the case in which handle 9 and/or cap 8 form a protuberance on the upper surface of the assembly, the bottom of the assembly will preferably have recess 28 which is at least equivalent so that said protuberance does not make stacks of such assemblies unstable.

Claims

1. A packaging made up of two canisters (2, 3), preferably with suitable dimensions with respect to one another for taking into account the proportions in which products (4, 5) are intended to be used together or separately, each of these canisters having neck (6, 7) closed by cap (8),

which canisters have shapes and dimensions such that, by two non-parallel bearing surfaces (14, 15), one of them (2) adopts the shape of the other canister (3) on at least two non-parallel bearing surfaces (10, 11), the two canisters together (2, 3) producing one packaging of regular, roughly parallelepipedic shape,

the canister that adopts the shape of the other having a longitudinal section roughly in the shape of an (L) of which vertical limb (12) extends from neck (6) to horizontal bar (13) of varying thickness, interior surfaces (14, 15) with respect to the angle formed by limb (12) and bar (13) producing bearing surfaces capable of adopting the shape of aforementioned non-parallel surfaces (10, 11) of the other canister such as in particular its bottom (11) and one of its lateral surfaces (10),

this packaging, which moreover has some means of association (8, 16, 17, 18) in order to hold the two canisters together, being characterized by the fact that the means of association include, between at least one of the groups of bearing surfaces facing one another (10, 14 and 11, 15) of the two canisters, at least one assembly (16) by tenon (19) and groove (20) with complementary cross sections, which groove (20):

- on one hand, opens on one of the bearing surface possessing it over a width (l) less than the width (L) in the same direction of this groove beyond its opening in said bearing surface and,
- on the other hand, opens at least at one of its ends in such a way as to allow the engagement of tenon (19) there by translation at least roughly parallel to the two bearing surfaces (14, 15) borne by the same canister.

2. A packaging according to Claim 1, characterized by the fact that groove (20) and the tenon have dovetail cross sections.

3. A packaging according to Claim 1 or 2, characterized by the fact that this assembly is offered by bearing surfaces (11, 15) producing upper surface (15) of the bar of the canister in the shape of an (L) and bottom (11) of the other canister (3).

4. A packaging according to any one of Claims 1-3, characterized by the fact that the means of association moreover include, in at least one of the groups of bearing surfaces (10, 14 and 11, 15), at least one means (17) for immobilization of this assembly in terms of translation.

5. A packaging according to Claim 4, characterized by the fact that means (17) for immobilization in terms of translation includes at least two complementary impressions (21, 22), one (21) male, the other (22) female of smaller width than that of said bearing surfaces.

6. A packaging according to Claim 4 or 5, characterized by the fact that immobilization means (17) is situated towards the free end of the vertical limb of the canister in the shape of an (L).

7. A packaging according to any one of Claims 1-6, characterized by the fact that in combination with the impressions, it has at least one single component (8) which fits on the two necks (4, 5) in order to hold them essentially applied against one another.

8. A packaging according to Claim 7, characterized by the fact that component (8) consists of ring (23) surrounding at least locally the two necks which therefore at least locally have cross sections producing complementary fractions of the internal housing of this ring.

9. A packaging according to Claim 8, characterized by the fact that the ring has a shape generated by revolution, particularly cylindrical, and is attached by screwing on corresponding bearing surface (24) of the two necks.

10. A packaging according to Claim 9, characterized by the fact that the ring is an integral part of cap (8) that closes the holes of the neck.

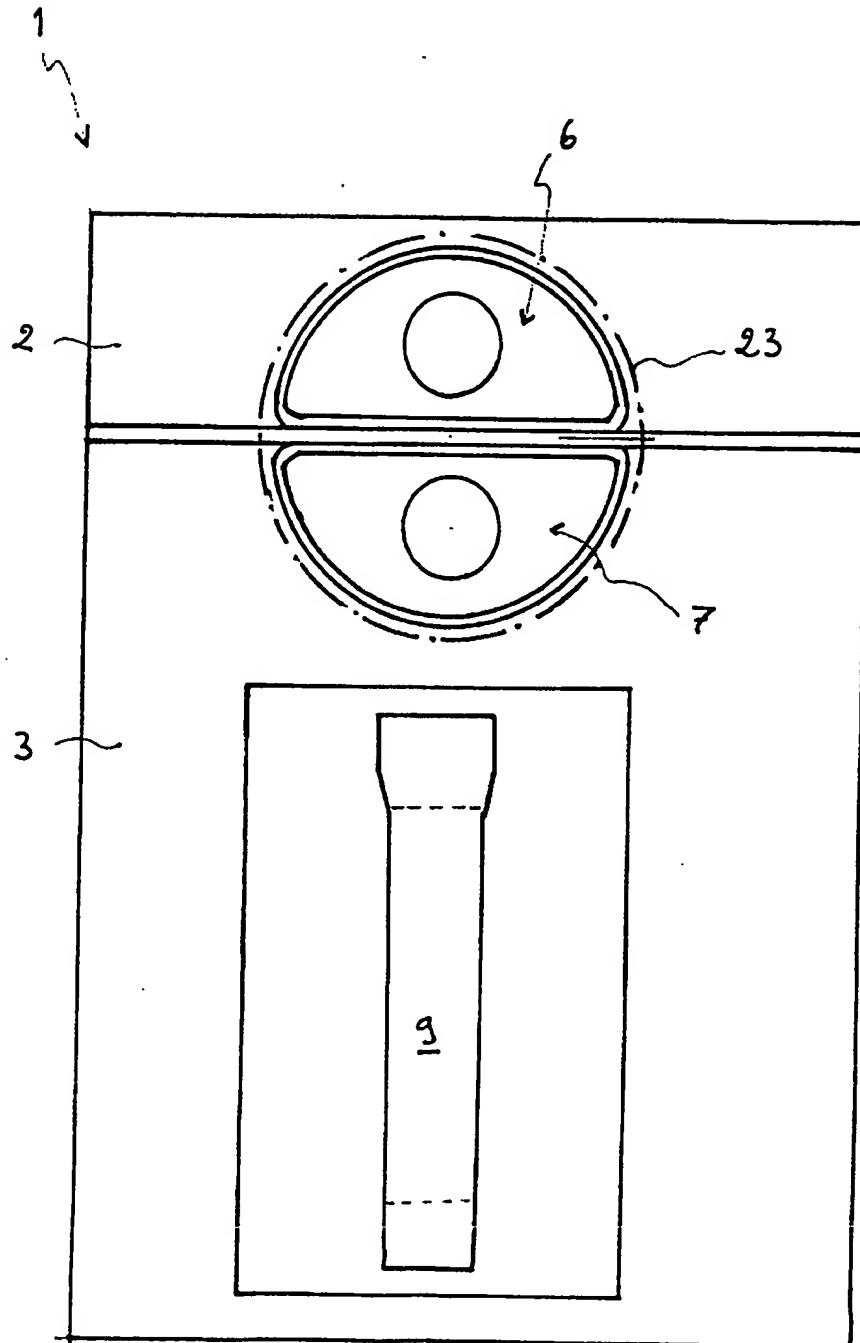


Fig-2-

FRENCH REPUBLIC
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SEARCH REPORT
established on the basis of the most recent
claims filed before the start of the search

Application Number
FR 8916844
FA 436349

DOCUMENTS CONSIDERED TO BE RELEVANT															
Category	Citation of document with indication where appropriate, of relevant passages	Claims concerned in the examined document													
A	US-A-4 381 841 (SCHWARZ) * In entirety *	1,2,4,5 ,6													
A	--- PATENT ABSTRACTS OF JAPAN, vol. 8, no. 154 (M-310)[1591], July 18, 1984 JP-A-59 49 948 (KOUJI MUROOKA) March 22, 1984 * Abstract *	1,2													
A,D	--- FR-A-2 446 777 (MAUSER) * Page 2, line 29 – page 3, line 16; figures *	1,7-10													
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D,A	US-A-3 782 600 (COLUMBUS)														
A	FR-A-2 598 393 (SAFET-EMBAMET)		TECHNICAL FIELDS SEARCHED (Int. Cl. ⁵)												
	FR-A-2 170 102 (PASING PATENT & LEASING) -----		B 65 D												
Date of completion of the search July 10, 1990		Examiner MARTENS L.G.R.													
<p align="center">CATEGORY OF CITED DOCUMENTS</p> <table border="0"> <tr> <td>X: Particularly relevant if taken alone.</td> <td>T: Theory or principle underlying the invention.</td> </tr> <tr> <td>Y: Particularly relevant if combined with another document of the same category.</td> <td>E: Earlier patent document, but published on, or after the filing date.</td> </tr> <tr> <td>A: Technological background.</td> <td>D: Document cited in the application.</td> </tr> <tr> <td>O: Non-written disclosure.</td> <td>L: Document cited for other reasons.</td> </tr> <tr> <td>P: Intermediate document.</td> <td>.....</td> </tr> <tr> <td></td> <td>&: Member of the same patent family, corresponding document.</td> </tr> </table>				X: Particularly relevant if taken alone.	T: Theory or principle underlying the invention.	Y: Particularly relevant if combined with another document of the same category.	E: Earlier patent document, but published on, or after the filing date.	A: Technological background.	D: Document cited in the application.	O: Non-written disclosure.	L: Document cited for other reasons.	P: Intermediate document.		&: Member of the same patent family, corresponding document.
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